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Before the Federal Communications Commission
Washington, DC 20554

Comment on CG Docket No. 16-145:
*Transition from TTY to Real-Time Text Technology*

Comment on GN Docket No. 15-178:
*Petition For Rulemaking To Update The Commission's Rules For Access To Support The Transition From TTY To Real-Time Text Technology, And Petition For Waiver Of Rules Requiring Support Of TTY Technology*

The New Mexico Commission for Deaf and Hard of Hearing Persons (NMCDHH) recognizes that the TTY, as a communication platform and device, is entering its sunset period and will be replaced with RTT in the near future. Prior to our comments, NMCDHH would like to state the things that are understood here in regards to the changeover:

1) The changeover comes as the TTY's means of connection is via PSTN and the use of Baudot code, as opposed to the comparatively new IP-based networks and other, more recent codes;

2) The TTY, which as a device is semi-portable, frequently requires a wired connection and dedicated to one purpose, really cannot compare to the multitude of portable and/or multipurpose WiFi-enabled devices that are available to Deaf/Hard of Hearing users today in the general market.

3) Those contemporary devices permits the Deaf/Hard of Hearing users to have comparable <u>but</u> not equal levels of communication access compared to others who do not have significant hearing loss and/or use ASL, another signed language or a sign system as their primary mode of communication.

4) We here at NMCDHH also recognize that there has been a significant delay in obtaining that access in the past when mobile devices and IP-based services began to become widespread.

5) We also recognize that for a long time, there had been major price differentials in telecommunication access devices for Deaf/Hard of Hearing users, which has only recently been reduced due to the growth of IP-based services and increased inclusivity/accessibility in the development of applications and basic framework of mobile devices.

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With that said, here are our comments:

1) We are curious as to what the predicted impact will be for manufacturers of the TTY. The TTY, with its much older technology and connection needs, is still priced at a higher point compared to many newer, more accessible devices, as has been pointed out in the above section. Manufacturers of the TTY will not need to adjust their products to include any RTT compatibility, as that is the responsibility of those who will develop and manufacture products and software for RTT. The observation of the comments on this proposal shows a significant number of the comments coming from those who will provide the RTT services, and references to those providers are made by the FCC as well. However, manufacturers of the TTY as well as those who will focus on manufacturing for RTT has been comparatively absent in the conversation, and that leaves unanswered the question of what will happen between now and when the TTY sunset is completed, especially in respect to what the purchasers and users of those devices will be subject. Additionally, establishing a deadline of December 2017 means that those RTT-ready devices may not be manufactured or have software readily available from now until that point, as there is no apparent incentive to start doing so until much closer to the deadline. Finally, in the proposal, on page 19, part 34, "Off-the-Shelf Devices", it is suggested that consumers will be able to purchase readily established devices off the shelf and enjoy widespread access at an affordable price. This brings about the following questions:

   a. Is there an expectation that those devices will be within the discretionary spending range for the average user *with hearing loss*; that is, Deaf *or* Hard of Hearing? Has that range been identified? Communication access is critical, but we need to make sure it's affordable to purchase, and not become financially burdensome for the individual over time as well.

   b. Will those devices be held to the same standards as all other devices for IP network usage? We have had complaints about "assistive technology" being sold in general stores that were vastly inferior and inadequate compared to those sold by specialty retailers, even if the general store products were much more affordable and accessible. This could lead to a burden if the user finds it necessary to return and replace the device or to "tolerate" the device until they can get a better, more appropriate one. Will this be avoided? If so, how will this avoidance be proposed?

   c. How will those devices be designed/supported for those individuals who are not only Deaf/Hard of Hearing, but also have accompanying disabilities? Especially those who are deafblind/have diminishing sight, have motor skills difficulties, or have cognitive/neurological disabilities? Those readily established devices will most likely be designed with the mass market in mind and those who have hearing

loss as a secondary consideration, which places those with multiple disabilities at a lower level of consideration – the group within the Deaf/Hard of Hearing community who will need this kind of access the most, especially in regards to text-to-911 and accessing communications of any kind. Additionally, those devices will most likely not rely on, or include, analog inputs (keyboard, etc.), which may make it difficult for some users to operate those devices.

    d. Will there be a universal design expectation or requirement for those future RTT devices?

2) There will, based on our impression, be a heavy, if not nearly complete, reliance on IP-based networks for TTY-to-RTT and alternatives in communication platforms, as well as the use of multipurpose devices (smartphones, computers, and the like). This brings two separate but related issues: Broadband access and user preference.

    a. What are the plans of those who will provide services, as well as the FCC, in addressing the connectivity concerns of those who rely on the TTY? Their reliance may be out of familiarity; a lack of access to broadband because of unavailability or a lack of reliable service; or because of financial or infrastructural constraints. We are aware that the FCC has several programs and initiatives in place to address slow or unavailable broadband access, but will there be something in place specifically for this changeover, and if so, how will it work? Deaf/Hard of Hearing users are, like the general population of the United States, spread out into urban, suburban and rural areas. In our state of New Mexico, with extensive rural areas, we need to make sure that these users are not missing out simply for being in the "wrong place" for communications development and technological innovation. Access to the Internet for basic information and communications has become a new norm for a significant majority of the United States, but this does not hold true for <u>all</u> of the country.

    b. For users, especially those who are older and/or have relied on the TTY extensively, have serious consideration been given to how they would handle such a changeover, especially when there does not seem to be any incentive for current, TTY-oriented manufacturers to prepare current and future users for the changeover? Additionally, will consideration be given to ensure that dedicated/single-purpose RTT devices be available to users? Technological changes can be intimidating for those who only use it and are not necessarily familiar with the inner workings of their devices, and the TTY represents, in some ways, the analog era, while the RTT is the digital era, with the transition from mechanical keys to touchscreens. Factor in the (possibly necessary) transition from analog landline to fiber optic/cable/DSL as well as the additional expense for connection and any other requirements, and it can be apparent that there may be resistance to RTT.

c. Will that consideration for the changeover and dedicated devices also be given for companies and public agencies who currently fulfill their ADA obligations but wish to upgrade, or will fulfill those obligations around the end of the sunset period, as they do now with public access TTYs and ADA compliance kits?

Submitted by

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